

Remarks and Arguments

Claims 1-7 and 10-14 are pending in the application. Claims 1, 5-7 and 10-14 stand rejected as being allegedly obvious over the theoretical combination of U.S. Pat. No. 4,169,907 to Barker and U.S. Pat. No. 5,019,202 to Kawahata. Claims 2-4 stand rejected as being allegedly obvious over Barker and Kawahata in further combination with U.S. Pat. No. 5,665,457 to Sato.

For the reasons set forth in the Applicant's response of May 31, 2005, it is respectfully submitted that the combination of Barker and Kawahata does not render obvious the methods recited in claims 1, 5-7 and 10-14. The Applicant respectfully submits that Barker describes a process in which a printable base and a silicone-containing ink are applied to a substrate. The silicone-containing ink repels a subsequently applied topcoat having a coloring pigment so that the topcoat forms ridges. In Barker, the prior applied ink, and not the topcoat, creates the desired decorative designs to be viewed. It is these designs that are prominently observed in the finished product, as shown in Barker Fig. 1. Because there was no coating present to define channels and repel the ink when it was applied, the ink was free to flow out during or after application. Thus, Barker's printing process is different from that recited in the claims.

In sharp contrast to the printing process of Barker, claim 1 of the present application recites the steps of printing a coating with a surface tension lowering additive in a pattern, and then applying an ink over the printed coating. The ink is then allowed to flow from the coating pattern areas to the non-pattern areas and dry in the form of raised profile ridges. Because the ink collects in the areas of exposed substrate defined between the profile lines formed by the coating, the ink forms crisp images without the possibility of unsightly flow outs. These crisp ink images cannot be achieved using the Barker process, in which the ink that makes up the features of the desired pattern is applied without the benefit of pre-defined channels. Kawahata does nothing to cure the deficiencies of Barker. For these reasons, and for those set forth in more detail in the May 31 response, claim 1 and its dependent claims are clearly distinguishable from the cited combination.

Despite these clear differences, in order to expedite allowance of the application, claim 1 has been amended to recite that the coating applied to the substrate is a clear or a translucent coating. Support for the amendment can be found in the specification, for example, in paragraph 0016. The step of applying a clear or translucent coating with a surface tension lowering additive further

distinguishes the method defined in claim 1. In sharp contrast to the application of a clear or translucent coating, Barker describes the application of ink portions 22. As discussed above, the ink portions are provided in order to establish a design on the substrate of Barker. They are not used to establish clear or translucent light-refracting boundaries adjacent printed matter as in the present invention.

Kawahata also does not describe or suggest the use of a clear or a translucent coating as a repellent for a subsequently applied ink layer. Instead, Kawahata describes a method in which a repellent-containing ink is first printed, and then the substrate is flood coated with a topcoat. Neither Barker nor Kawahata suggests the application of a clear or translucent coating to define channels for receiving an ink that is subsequently applied. Therefore, the theoretical combination of Barker and Kawahata does not describe or suggest the features recited in independent claim 1. (Sato likewise describes the application of an ink first, followed by the coating of a topcoat, and does not suggest the steps of claim 1.) For these reasons, it is respectfully requested that the rejection of claim 1 and its dependent claims be reconsidered and withdrawn.

It is also respectfully submitted that claim 2 is independently patentable for additional reasons over those set forth above in connection with claim 1. Claim 2 recites that the coating is printed in a pattern of substantially parallel lines. On page 3, the Office Action asserts that printing in parallel lines is not a patentable feature because it involves only an obvious matter of design choice. The Applicant respectfully submits that printing of the coating in parallel lines is not merely a matter of design choice. Instead, the pattern in which the coating is printed can serve a functional and important role in the claimed method.

Specifically, the coating applied to the substrate includes a surface tension lowering additive, which serves to repel the subsequently applied ink. As described in the specification, for example in paragraph 0016, the ink will collect in the areas of exposed substrate between the profile lines formed by the coating. Because the coating is applied in parallel lines, precise channels can be formed for collecting the ink in patterns that represent letters, other graphics of interest or a pattern of inked lines, as shown in Fig. 1. Due to the repulsive nature of the surface tension lowering additive in the coating, the ink forms raised ridges oriented along the patterned lines of the coating. When the profile lines of coating are parallel, the ink includes ridges that run uniformly along the length of the printed line. In the finished product, the coating will refract light and cause the printed

matter (*i.e.*, the ink) with uniformly extending ridges to change appearance when viewed from different angles. Thus, the pattern in which the coating is printed can be both functional and is an important feature of the invention. It is not a mere matter of design choice.

The office action also asserts that Sato shows the printing of parallel lines in the Figure. The Applicant respectfully submits that the Figure of Sato merely shows a cross section of the decorative paper described therein. The cross section represents a slice through the printed paper showing two portions of a pattern layer 3. Based on the cross sectional view, one skilled in the art would not understand that the two pattern portions 3 are printed in a parallel configuration. Instead, the skilled artisan would recognize from the cross section that the portions 3 could be running transverse to one another and intersecting in front of or behind the page. Therefore, the Figure of Sato provides no suggestion that the printed pattern would be applied in parallel lines.

The written description of Sato also does not describe or suggest printing in parallel lines. It is well settled that when a reference is silent as to a claim element, the element can be deemed inherent only if it is necessarily present in the reference. MPEP § 2112. The fact that a certain condition may be present in the prior art is insufficient to establish inherency. *In re Oelrich*, 212 USPQ 323, 326 (CCPA 1981). Printing in parallel lines is not necessarily present in Sato.

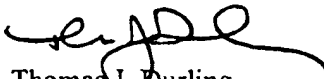
Instead, at col. 3, line 50, Sato merely describes that a design can be printed so as to imitate the grain of wood. One skilled in the art would understand that printing a wood grain pattern would not necessarily involve printing in parallel lines. Also, a typical wood grain pattern includes irregular features that simulate the growth patterns of natural wood, including those features produced by variations in growth activity from year to year and those produced as factors of the local environment, such as knots created by branching. Because the wood grain pattern of Sato does not necessarily include parallel lines, Sato neither explicitly describes nor inherently includes the printing of a pattern in parallel lines.

For the above reasons, in addition to the reasons set forth above in connection with independent claim 1, it is respectfully submitted that the feature of claim 2, relating to printing in parallel lines, is patentable over the cited references. For these reasons also, it is respectfully requested that the rejection with respect to claims 2-4 be reconsidered and withdrawn.

It is respectfully submitted that the application is now in condition for allowance, which action is earnestly solicited. If the Examiner believes that further minor amendments or corrections

as to matters of form will expedite allowance of the application, the Examiner is invited to telephone the Applicant's undersigned attorney.

Respectfully submitted,



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